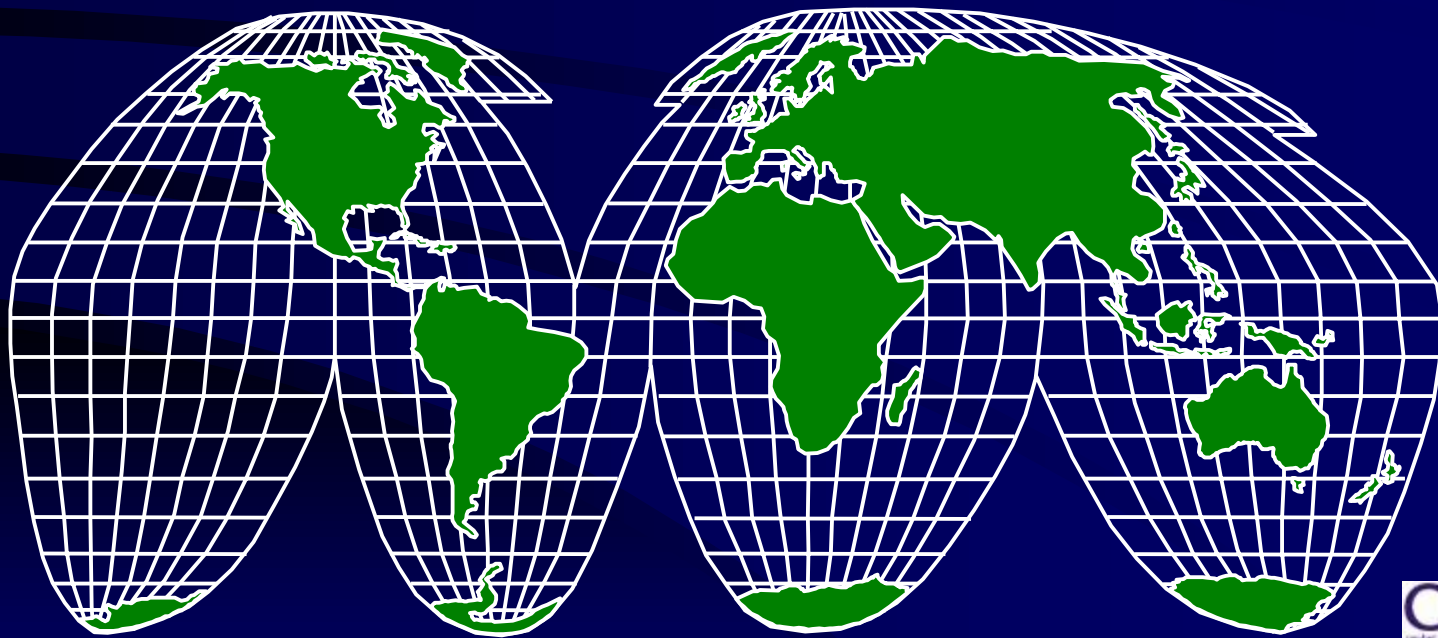


Lesson 14

Surveillance Issues in Developing Countries



Objectives for Lesson 14

- Describe how surveillance is conducted in developing countries
- Discuss the key issues relating to surveillance in developing countries
- Define key terminology used in surveillance in developing countries
- Describe the planning process for surveillance in developing countries
- Describe population based surveillance
- Describe the building of integrated surveillance systems



Considerations in Conducting Surveillance in Developing Countries

- health care system
- limited health-care providers and labs
- acute diseases and injuries
- potential obstacles to developing surveillance systems



Issues Relating to Surveillance

- planning
- surveillance at the local level
- data sources
- development of integrated surveillance systems



Terminology

Local:

- the health station where health assistants work
- usually the lowest level of the formal health system

Population-based:

- describes information for all persons in a certain geographic unit

Facility-based:

- represents only persons from the catchment area of a given health facility



Identifying health objectives and linkage to surveillance:

- alleviates the pitfall of thinking of surveillance as just the reporting of disease rather than as a system that uses information from multiple sources
- helps planners to think creatively in efforts to build a surveillance system to measure all priority health objectives



Basic Surveillance Components

- case definition and reports
- births and deaths
- laboratory results
- sample surveys



Bases for Health Objectives

- health impact
- feasibility of intervention
- cost-effectiveness of the intervention



Sources for Estimates of Mortality and Health Outcome

- UNICEF
- WHO
- international conferences
- population laboratories



Problems with Relying on Data from Other Countries

- difficulties may arise for condition for which impact is not clearly known
- difficulties may arise for emerging health problems
- for each health objective, the surveillance method for evaluating that objective and sub-objective should be listed



Example of Objectives Linked to Surveillance Components

Objective: Priority area #1-Diarrhea

Surveillance Component that Measures Objective

Health Status- reduce diarrhea by 25% by 1995

- vital-event registration in five sentinel areas

Risk Factor- increase female literacy of 10-14 year olds to 80% by 1995

- regularly conducted integrated health survey

Health Active- increase to 90% the proportion of 0-4 year olds given appropriate home fluids by 1995

- regularly conducted integrated health survey
- local exit interviews



Surveillance Grids

- identify which surveillance component will measure health objective
- help to visualize overall structure and function of surveillance system
- provide basis for strengthening existing components
- help develop innovative new surveillance system components
- facilitate the integration of some aspects of surveillance which may increase cost efficiency



Steps in Establishing a Surveillance Grid

- establish a list of the surveillance methods for evaluating objectives and sub-objectives
- construct surveillance grid to show components of the system which will measure which objective



Items on a Surveillance Grid

- regular measurement of risk factors
- health-related behaviors
- health intervention activities



Surveillance of Measurements of Process

- example - coverage with vaccinations
- currently emphasized at national and global levels
- do not directly measure primary events of interest



Surveillance of Measurements of Health Outcomes

- example - cases of measles
- systems for efficient measurement of population-based health outcome do not exist
- successful outcome-based programs include smallpox, guinea worm, and poliomyelitis



Population-Based Surveillance

- in developing countries there are disparities of access to health facilities
- there are disparities of health status in urban centers versus rural areas
- rural areas may not be well represented unless population-based surveillance systems are used



Vital-Event Registration

- most important single addition that developing countries can make to their existing surveillance system
- useful rates:
 - death rates
 - cause-specific rates
 - gender-specific rates
 - birth rates
 - age-specific rates



Regular, Periodic Surveys

- cluster surveys
- survey unit or survey person
- development of questionnaire



Sentinel Surveillance

- uses for sentinel sites
- potential problems in interpreting data from sentinel sites
- important information from hospitals



Importance of Local Surveillance

- major health problems in developing countries require innovative public health action at the local level
- local surveillance and linked public health action will be essential for most of the priority disease and related prevention activities



Benefits of Data Analysis and Consequent Action

- public health personnel and patients can see results of data-collection efforts
- local staff can be involved in the process of devising strategies to solve health problems



Exit Interviews and Focus Groups

Exit Interviews:

- ideal for measuring progress toward local health objective

Focus Groups:

- can be used to gain new information and to generate ideas about why events and behavior occur



Advantages to Integration Surveillance and Evaluation

- surveillance information can be gathered with greater cost-efficiency
- requirement for health-station staff will be simplified
- training of staff will be less duplicative



Continuing Issues

- surveillance systems
- sentinel sites
- linkage of health objectives to surveillance



Key Factors in Implementing Surveillance Systems

- plan surveillance systems
- avoid fragmented surveillance systems
- develop clear, achievable objectives
- allocate resources to the interest of the public's health
- avoid politicized, large divisions between curative and preventive medicine
- avoid differences in health care in rural versus urban areas

